India’s macromanagement of debt has gone through three phases: from 1950 to 1986, from 1986 to 1992, and from 1992 onward. Phase 1 was characterized by a captive market and the absence of debt management. This was the consequence of relying on reserve requirements and a policy of directed investment coupled with an emphasis on raising cheaper resources to finance the government’s developmental activities. Phase 2 saw a gradual shift toward passive debt management because of concern about expected future developments and the potential danger of continuing with automatic monetization. These efforts culminated in the active management of debt in phase 3.

As an integral part of a comprehensive program of financial sector reform, India’s government securities market (GSM) has undergone a huge transformation since 1991/92. The main objective of this active debt management policy has been to moderate liquidity growth, contain inflationary pressure, and conduct debt management in a cost-effective manner. Considering India’s macromanagement and micromarket structure, the developments since 1991/92 can be divided into two subphases.

During the first subphase (1991–96), reforms were engineered to facilitate “market-borrowing,” with price discovery through auctions; restrict automatic monetization by fixing a cap on the during-the-year and end-year amount; develop appropriate instruments;
introduce a delivery-versus-payment system (DVP) in order to mitigate the settlement risk; promote greater transparency of prices and volumes traded through daily publication of transactions in government securities; and introduce a system of marking to market in the valuation of government securities held by commercial banks.

The second subphase (post-1996) has focused mainly on the market microstructure. Here, the emphasis has been on introducing a system of primary dealers (PDs) and satellite dealers, with underwriting or bidding commitment for 100% of the issue; introducing various tenors in treasury bills and publishing a half-yearly calendar for the issuance of treasury bills; establishing ways and means advances (WMAs) to the central government to bridge temporary mismatches in its receipts and payments; strengthening the government of India’s (GOI) cash management system to facilitate government borrowing in a cost-effective manner; permitting foreign institutional investors to invest in government securities including Treasury bills, both in primary and in secondary markets; expanding the players in the repos market by allowing non-bank participants to borrow and lend in that market; switching over from yield-based to price-based auctions, to facilitate finer bidding; passively consolidating debt by reopening or reissuing existing securities, and thereby helping to create benchmarks and to improve price discovery; making price auctions uniform in the case of 91-day treasury bills on an experimental basis; fostering state government borrowing through the auction system; establishing 100% gilt funds to promote retail holding of government securities; and issuing long-dated securities of up to 20 years to serve as a benchmark for private debt and to elongate maturity for the government.

In addition, a high-powered Standing Technical Committee on money and government securities markets has been set up under the deputy governor to advise the Reserve Bank on various matters relating to money and debt markets.

Significant reforms have also taken place in the nongovernment debt market. On the regulatory front, the Securities and Exchange Board of India (SEBI) was established in 1992 to regulate the primary issuances in capital and debt markets other than government
India’s debt market has undergone significant transformation in recent years in terms of policy initiative and market evolution. Emergence of a market-responsive yield curve and the shifts therein have started reflected the changing economic scenario and give an idea of the future course of economic events. The auction system has helped market interest rates converge in the sense that in a highly liquid market, secondary market yields should anticipate yields in primary issues emerging from time to time. The sovereign yield curve, now more reliable, has emerged as a benchmark for pricing non-government loans. With less reliance on reserve requirements, open-market operations (OMO) have emerged as a major tool of monetary policy. In the face of stiff competition from the government’s small savings schemes, which offer tax incentives, the retail investor base has been tapped through gilt funds. The move toward price discovery through a price-based auction system and reopening has helped financial intermediaries develop bidding skills. These various benefits have also brought certain constraints, however.
CONTRAINTS

The main constraints have to do with the magnitude of government borrowing, seasonality in credit needs, shrinkage in the maturity profile of debt, fragmentation of loans, and the role of the Reserve Bank of India (RBI) as monetary authority and debt manager.

Magnitude of Government Borrowing

Now that the government has decided to raise resources at market-related prices, the composition of the fiscal deficit and maturity profile of the central government debt has changed. Gross market borrowing, which was only about Rs 8,000 crore (Rs 80 billion) in 1990/91 shot up to Rs 93,453 crore (Rs 935 billion) during 1998/99. With the abolition of automatic monetization and introduction of WMAs, the pressure on the government’s market borrowing program has increased immensely. The government is forced to resort to market borrowing when the magnitude of WMAs surpasses the mutually agreed limit between the central government and Reserve Bank (Rs 11,000 crore or Rs 110 billion during the first half of the fiscal year and Rs 7,000 crore or Rs 70 billion during the second half). Furthermore, any increase in the budgeted borrowing requirement (fiscal deficit) is met through additional market borrowing. This is evident in the trends of market borrowing since fiscal 1997/98, when the budgeted amount significantly increased in the actual outcome.

The market borrowing program has increased 10 times since 1990/91, and the statutory liquidity ratio (SLR) prescription has been brought down from 38.5% to 25% over the same period. Furthermore, banks are holding excess SLR securities to the tune of Rs 60,000 crore (Rs 600 billion). Assuming that deposits in the banking system grow about 15% to 20% during 1999/2000, which translates to an increase of about Rs 130,000 crore (Rs 1,300 billion), India would have to maintain an SLR of about Rs 32,500 crore (Rs 325 billion), which is less than the level of excess SLR holding by banks. This would mean that in the present circumstances the SLR prescriptions do not in reality obligate banks to buy fresh government paper. Hence the need for a diversified investor base is greater than ever before.
Seasonality in Credit Needs

During the first half of the fiscal year (April–September), when the demand for credit from the nongovernment sector is low (slack season), the government usually tries to complete most of its borrowing requirements. The demand for credit from the nongovernment sector picks up during the second half (October–March), called the busy season. This seasonal demand for credit from both the government and nongovernment sector makes it difficult to spread the government’s borrowing program evenly over the fiscal year. Furthermore, in the absence of cash management, owing to heavy reliance on automatic monetization, little information is available on the quantum and timing of borrowing requirements. This, in turn, makes it hard to take advantage of market timing to optimize the cost of borrowing, with the result that short-term borrowing may at times cost more than long-term borrowing within the span of the same fiscal year. To some extent, the problem is now being addressed through periodic meetings of officials from the government and the Reserve Bank of India through a forum called the Cash and Debt Management Committee.

Shrinkage in the Maturity Profile of Debt

With the switchover to the system of borrowing at market-related rates and the growing borrowing requirements, there has been some need to shorten the maturity structure so as to reduce the cost, apart from making the tenor of government securities attractive to investors. Consequently, the weighted average maturity was drastically reduced from about 16 years in 1990/91 to about 7 years in 1997/98. As a result, redemptions are expected to balloon into the foreseeable future. With greater net borrowing required to meet the fiscal deficit, the gap between the gross and net borrowing program has grown and prompted serious deliberations on the need to stretch the maturity profile of the government debt. Some have argued that short-term borrowings would reduce the relative cost of borrowing for the government, but this short-sightedness, however, can result in a rise in costs, as demonstrated in 1995 when interest rates rose as the government tried to refinance its repayment obligations. A higher in-
The term cost for the government in terms of periodic coupon payments, while borrowing long-term, has to be regarded as compensation for the long-term sustainability of government borrowing.

**Fragmentation of Loans**

The size of the gross borrowing requirement and the market’s, absorptive capacity at any particular point in time has put constraints on the size of individual issues and accordingly has increased the frequency with which the government enters the market to raise resources. Efforts were made to accommodate a series of new issuances within a narrow 10-year maturity band in order to prevent a bunching of repayments, but loans became fragmented as a result, and this impinged upon the liquidity of the government securities. Loans therefore need to be consolidated to improve the fungibility and liquidity of securities and to pave the way for introducing STRIPS in the GSM. The reopening of existing stocks marks a first step toward passive consolidation.

**RBI's Role as Monetary Authority and Debt Manager**

During 1998/99, yields in the government securities market were greatly influenced by the degree of effectiveness in coordinating debt management policy and monetary policy, with the former focusing on the timing of the loan for deriving maximum benefit of liquidity conditions and the changing maturity mix of borrowings. Apart from these factors, the slack in demand for bank credit and the surplus liquidity conditions within the banking system contributed to the high absorption of government securities. To achieve effective debt management in the medium term, however, government borrowing from the market needs to be reduced substantially and fiscal policy needs to dampen inflation expectations.

**EXPERIENCE**

Since 1991/92, debt management has been tackled through a judicious mix of policy measures and market timing, and the develop-
ment of markets has become the main focus. This section deals with that experience, highlighting primary issuance, open-market operations, market absorption and the monetization of fiscal deficit, secondary market transactions, and the performance of the primary dealer system.

Primary Issuance

Primary issuance can be discussed from the perspective of the central government, state governments, elongation of the maturity profile, and initial subscription by the RBI.

Central Government. The central government’s market borrowing program comprises the issuance of dated securities and 364-day treasury bills. The central government also borrows through 182-, 91-, and 14-day T-bills. The amount mobilized through other treasury bills, though added to the total borrowing requirements, do not form part of the market borrowing program. The surge in the market borrowing program since 1997/98 can be traced to the abolition of automatic monetization, which made the program a residual source of financing for the government. Note, too, here have been some deviations from the budgeted program on account of the increase in the fiscal deficit. Such high levels of borrowing, particularly during the past few years, made it necessary to resort to primary issuance of dated securities on 24 occasions (including private placement with the Reserve Bank on 8 occasions) during 1998/99, as against 13 occasions (including private placement on 3 occasions) in 1997/98. Of these 24 occasions, 11 took place during April–July 1998, when the government ran into overdrafts with the Reserve Bank. During the first half of 1999/2000, the central government has already borrowed more than three-fourths of the budgeted amount by entering the market on 15 occasions (including private placement on 7 occasions).

State Governments

Over the years, the state governments have also borrowed increasing amounts under the market borrowing program, rising from Rs 2,569 crore (Rs25.69 billion) in 1990/91 to Rs 12,114 crore (Rs
121.14 billion) in 1998/99. According to the constitutional provi-
sion, the state governments cannot borrow without the approval of
the central government, and are not permitted to borrow exter-

nally. At present, the state governments are borrowing through dated
securities and there are no treasury bills borrowings by state gov-

ernments.

In the move toward a system of auctioning state loans, state gov-

germents have been allowed to raise resources through auction to

the extent of 5% to 35% of the allocated borrowings. A few state
governments have exercised this option, at an interest rate slightly
below the rate on the conventional jointly floated loans for all states
for a similar maturity.

*Elongation of Maturity Profile.* As indicated earlier, growing bor-
rowing requirements coupled with redemptions on account of huge
short-term borrowings between 1992/93 and 1997/98 posed serious
problems for refinancing the maturing loans, and it was essential to
issue securities with tenors above 10 years. Though the idea of stretch-
ing the maturity profile has been in the cards for some time, it was
only during fiscal 1998/99 that a decision was made to test the mar-


tets with long-term securities. Consequently, after a gap of 7 years,
longer-dated securities with tenors of 11, 12, 15, and 20 years were
issued in fiscal 1998/99. With this change, the weighted average term
to maturity of the dated securities rose from 5.50 years in 1996/97 to
6.58 years in 1998/99 and 7.71 years in 1998/99. In line with the
trend, more than 60% of the gross borrowing requirements have so
far been met through issuance of dated securities with
term-to-maturity of above 10 years in the present fiscal year. As a
result, the weighted average maturity of the loans issued during the
current fiscal year has so far been about 13 years as against a weighted
average maturity of 7 years in the previous year.

*Price-based Auctions and the Reopening of Existing Loans.* A note-
worthy aspect of the internal debt management operations during
the current fiscal year was the shift from yield-based auctions to
price-based auctions. While this helped participants achieve more
aggressive and finer bidding, the reopening of existing issuances
also sharpened price discovery. Of the total 20 loans issued in the
current fiscal year, only 3 were new issues whereas the rest were reissues.

**Initial Subscription by Reserve Bank of India.** In view of the growing market borrowing requirements as well as the market’s absorptive capacity at any particular point in time, the Reserve Bank decided in fiscal 1998/99 and the current financial year to take securities on its book on a private placement basis and subsequently unload them through active open-market operations. Of the total amount of gross borrowing raised through dated securities, private placement with the Reserve Bank and devolvement on the Reserve Bank during 1998/99 was Rs 38,205 crore (Rs 382 billion), or 45.6%, compared with Rs 13,028 crore (Rs 130 billion), or 30% in 1997/98. So far during 1999/2000, initial subscriptions by the Reserve Bank in terms of private placement has totaled Rs 23,500 crore (Rs 235 billion), or about 42% of the total dated securities issued.

During fiscal 1998/99, there was also a devolvement on the Reserve Bank on account of treasury bills. The devolvement with respect to 364-day T-bills totaled Rs 1,047 crore (Rs 10.47 billion), or 21% of the gross issues. Similarly, the devolvement on the Reserve Bank on 91- and 14-day T-bills reached Rs 451 crore (Rs 4.51 billion) and Rs 260 crore (Rs 2.6 billion), or 13% and 23% of the notified amount, respectively. During the first half of the current fiscal year, the devolvement of 364-day T-bills amounted to Rs 1,692 crore (Rs 16.92 billion) whereas for 14-, 91-, and 182-day T-bills the devolvement as a whole has been Rs 1,757 crore (Rs 17.57 billion), or 26% and 27.5% of the notified amounts, respectively.

**Open-Market Operations**

With less reliance on reserve requirements, more emphasis is being placed on indirect instruments of monetary control. This, coupled with the need for large market borrowings, has paved the way for open-market operations (OMO).

During fiscal 1998/99 and the current financial year, the Reserve Bank of India resorted to active OMO to neutralize a large amount of private placement of government securities with itself and to maintain an orderly flow of liquidity in the market. An important
feature of the open market operations during 1998/99 and at this time was the inclusion of treasury bills; up to September 1999, the net sales under OMO amounted to Rs 25,750 crore (Rs 257.50 billion). During 1998/99 the net sales under OMO were Rs 29,669 crore (Rs 296.69 billion).

Because of large-scale OMO by the Reserve Bank, its holdings of central government securities declined substantially. Consequently, the net RBI credit to the center was placed at Rs 11,800 crore (Rs 118.0 billion) in 1998/99 as against Rs 12,914 crore (Rs 129.1 billion) in the previous year. During the first half of the current fiscal year, net RBI credit to the center was Rs 3,510 crore (Rs 35.10 billion) as against Rs 1,857 crore (Rs 18.57 billion) in the previous year.

Ways and Means Advances to Central and State Governments

India’s experience with WMAs can be seen at both the central and state levels.

Central Government. During fiscal 1999/2000, the limit for WMAs has been fixed at Rs 11,000 crore (Rs 110 billion) for the first half (April–September 1999) and Rs 7,000 crore (Rs 70 billion) for the second half (October–March 2000). From April 1, 1999, the interest rate was revised to the bank rate on WMAs and to the bank rate plus two percentage points on overdrafts beyond WMAs. A transition period of two years that provided for implementation of the Overdraft Regulation Scheme came to an end on March 31, 1999. According to the provisions of the agreement dated March 26, 1998, between the central government and the Reserve Bank, overdrafts beyond 10 consecutive working days will not be allowed from April 1, 1999. The minimum balance to be maintained by the central government with the Reserve Bank has also been revised from not less than Rs 50 crore (Rs 0.5 billion) to Rs 100 crore (Rs 1 billion) on Fridays, and from not less than Rs 4 crore (Rs 0.04 billion) to Rs 10 crore (Rs 0.1 billion) on other days.

The government’s recourse to WMAs and overdrafts during fiscal 1998/99 revealed the pressure on liquidity management. This was in marked contrast to the trend of 1997/98 when the central government ran a surplus for most of that year. The year-end level
of WMAs was placed at Rs 3,042 crore (Rs 30.42 billion) in 1998/99, as against Rs 2,000 crore (Rs 20 billion) in the previous year. So far during fiscal 1999/2000, though the pressure on liquidity continued in April 1999, thereafter the recourse to WMAs has been lower, and as on September 30, 1999, the WMA outstanding level was Rs 3,856 crore (Rs 38.56 billion).

**State Governments.** Recognizing the difficulties faced by state governments and following the recommendations of the Informal Advisory Committee on Ways and Means Advances to State Governments, constituted by the Reserve Bank of India, the Bank has revised the amount of WMAs in effect from March 1, 1999. According to the revised scheme, the limits of WMA have been increased by 65% to Rs 3,685 crore (Rs 36.85 billion). The limits for special WMAs were liberalized. The overdraft regulation scheme has been made more stringent. The minimum balance has been revised upward. The revised scheme has been in effect from March 1, 1999.

The monthly average peak of normal WMAs, special WMAs, and overdrafts relied on by state government during 1998/99 amounted to Rs 2,147 crore (Rs 21.47 billion), with the peak average ranging from Rs 536 crore (Rs 5.36 billion) in May 1998 to Rs 4,818 crore (Rs 48.18 billion) in March 1999. During 1998/99, 17 states resorted to overdraft, and 11 of them did so frequently. Five states could not clear their overdrafts with the Reserve Bank within the stipulated time limit, and consequently the Reserve Bank had to stop payments on their behalf.

In its role as debt manager to state governments, RBI has been consulting more and more with the state governments in order to improve cash and debt management. Its responsibilities in this regard include the constitution of Consolidated Sinking Fund, a flexible approach to market borrowing, and sensitization to the growing problem of contingent liabilities, especially guarantees.

**Retailing of Government Securities**

One way to reduce the cost of borrowing is to widen the investor base for government securities. Considering the tax incentives given to other competing instruments of similar quality, promoting a retail
market for government securities implies ensuring liquid markets for the retail investor. This would require custodial facilities to be dispersed with fully automated connectivity to the central settlement agency. With the promotion of gilt funds, India took the first steps toward indirectly establishing a conduit for retailing government securities. These funds have been made eligible for liquidity support from RBI to the extent of 20% of the outstanding government securities in their portfolio. The first such fund was set up toward the end of 1998. Since then the number of gilt funds has been growing steadily.

**Enlistment of More Primary Dealers**

To promote greater competition, eight more primary dealers, 75% of which are subsidiaries of foreign banks/security houses, were inducted during 1998/99 and 1999/2000. Thus the total number of PDs functioning in the government securities market has risen to 14. Enhanced underwriting options up to 100% have been introduced for dated securities and compulsory bidding commitments so as to absorb 100% of the primary issue in the case of treasury bills. These measures are aimed at reducing the possibility of devolvement on the Reserve Bank of India and the consequent monetization.

An analysis of the performance of the six PDs for fiscal 1998/99 revealed that whereas the bidding commitment was Rs 16,350 crore (Rs 163.50 billion) and Rs 26,900 crore (Rs 269 billion) in treasury bills and central government dated securities, respectively, the actual bids tendered by PDs were Rs 32,134 crore (Rs 321.34 billion) and Rs 25,024 crore (Rs 250.24 billion). Of these, the bids accepted were Rs 15,652 crore (Rs 156.52 billion) for treasury bills and Rs 13,252 crore (Rs 132.52 billion) for central government dated securities. The amount of devolvement to PDs was Rs 2,991 crore (Rs 29.91 billion) in dated securities and Rs 2,367 crore (Rs 23.67 billion) in treasury bills. Trading turnover by PDs accounted for 19% of the total market turnover.

**Secondary Market Transactions**

As the government securities market deepened, the aggregate volume of transactions (outright as well as repos) in central and state
government dated securities and treasury bills moved significantly higher, from Rs 1,85,708 crore (Rs 1857.08 billion) in 1997/98 to Rs 2,27,228 crore (Rs 2,272.28 billion) in 1998/99. The volume of transactions in state government securities was marginal at Rs 1,544 crore (Rs 15.44 billion). The bulk of transactions, amounting to Rs 1,87,531 crore (Rs 1875.31 billion) (83%) were conducted on an outright basis, and the balance by way of repos. Total turnover in government securities during fiscal 1998/99 amounted to Rs 5,33,850 crore (Rs 5,338.50 billion), as against Rs 4,20,655 crore (Rs 4,206.55 billion) in 1997/98. The outright turnover came to Rs 3,75,062 crore (Rs 3,750.62 billion) as compared with Rs 3,22,179 crore (Rs 3,221.79 billion) in 1997/98.

**Yields on Primary Issues**

Notwithstanding the large-scale borrowing program, the interest rates remained fairly stable during the course of 1998/99, as they have so far in the current fiscal year. The weighted average yield on dated securities declined from 12.01% in 1997/98 to 11.86% in 1998/99, which was very close to the level of 1991/92. Despite significant elongation in maturity to an average of 13 years during the current fiscal so far, compared with about 8 years during the previous year, the weighted average yield on dated securities has increased marginally by 11 basis points, to 11.97%. Primary yields on government securities fell nearly 66 basis points over a 10-year period, dropping from 12.25% in December 1998 to 11.59% in the recent auction on August 27, 1999.

**FUTURE AGENDA**

In the wake of a substantially large market borrowing program, the Reserve Bank recently adopted a strategy of funding the government's fiscal deficit and at the same time reducing the pressure on interest rates and inflation expectations. Market development was an important component of the agenda in recent years and will receive concentrated attention in the future. The issues that need to be addressed in this regard are outlined in the following paragraphs.
Auction Systems

Despite the controversy surrounding the relative merits of the uniform-price auction system and the multiple-price auction system, the Reserve Bank of India has been using the uniform-price auction method for the issuance of 91-day treasury bills since November 1998. This has been done on experimental basis. Though it is true that the uniform-price method reduces the uncertainty and the incidence of the winners’ curse, in the absence of empirical evidence regarding the possible cost to government borrowing, it has not been possible to test this suggestion. In a stable and deep market, expectations as to the yield/price are very close to the yield/price that emerges at the auction. Furthermore, in such markets the price difference between the uniform-price and multiple-price auction systems are not so significant. The difference could be significant, however, in the case of developing markets such as those in India. Apart from this, concerns such as collusion and the state of development of the market could favor the multiple-price auction system.

Introduction of a “When-Issued” Market

Although the auction system has contributed to a price discovery mechanism, such a mechanism is not fully efficient without a “when-issued” (WI) market. In other words, a WI market complements the efforts of an efficient auction system through the price discovery mechanism. At present one cannot trade in securities prior to the issue because forward trading in securities is prohibited. A consensus is emerging in favor of developing a WI market as part of the overall development of the debt markets. To a certain extent, reissues have facilitated price discovery, as it is possible to trade in the issue to be auctioned.

Issuance of Auction Calendar

At present there is an auction calendar for the issuance of treasury bills, announced half-yearly. It has been argued that such a calendar imparts a sense of certainty to the market in regard to the volume,
timing, and tenor of securities, but the issuer is forced to sacrifice flexibility and to sharpen the skills used in predicting market changes. With government finances following a random pattern, giving the least indication of its borrowing requirements, both in terms of volume and of timing, the issuer cannot but retain this flexibility. So far, this constraint has not permitted the announcement of an auction calendar for government securities.

Repos Market

As is now widely recognized, repo markets facilitate better cash and debt management and also provide liquidity to securities markets through securities lending and borrowing. Because repos are short-term collateralized instruments, repo markets are intimately connected with money securities and derivative markets. Central banks find them a useful monetary policy instrument and source of information on market expectations. Recognizing that a repo market contributes to a vibrant secondary market in debt instruments, a subgroup of the Technical Advisory Committee on Government Securities Markets has recommended changes in the existing legal system as well as the kind of infrastructure needed to develop the repo market. The proposals include giving RBI regulatory powers over repos; facilitating the electronic transfer of securities; withdrawing of government notification dated June 27, 1969, under the Securities Contracts Regulation Act (SCRA) of 1956, which prohibits forward trading in securities; and introducing of over-the-counter and tripartite repos.

The group has also recommended a uniform documentation code of conduct for market participants and uniform accounting policies to reflect the content rather than the form of repo contracts settlement through the clearing corporation for participants other than the central bank constituents. The risks inherent in repo transactions can be minimized by ensuring timely mark to market of securities repoed, by issuing prompt margin calls and haircuts, and by ensuring adherence to the discipline of the exchange. The RBI is committed to develop the repo market with adequate safeguards and the recommendations of the group are being put into operation.
Development of STRIPS

Introducing STRIPS in GSM would hasten the process of diversifying the investor base and also help boost secondary market activities in government securities. This would also give rise to a zero yield curve. The preconditions for such a market are fungibility of interest payments under different loans so as to constitute a critical minimum mass, and active repos/reverse repos market programs coupled with fully automated trading and settlement systems to handle the enormous amount of bookkeeping that STRIPS entail. As a precursor to STRIPS, efforts are under way to consolidate the loans.

Regulatory Concerns

The Indian debt market has a huge private placement market in debt instruments that is unregulated. At present, private placement does not come under the usual “disclosure and protection of investors’ interest” norms prescribed by the Securities and Exchange Board of India (SEBI), even though most of the issues are rated by credit-rating agencies. The risk of default to investors could be a problem, one that could pose systemic risks if the investors involved happened to be large financial institutions. Hence, this market needs to be brought under direct regulation, apart from indirectly doing so through banks and institutions that are the major informed investors in these markets. Since state government guaranteed bonds constitute a significant segment of this market, any assessment of risk would require much greater transparency and disclosure in the accounts of the state governments. Another committee has been set up specifically to look at the kind of disclosures that should be made in the accounts.

Legal Concerns

A move has begun to replace the now outmoded Public Debt Act with a new Government Securities Act, but it still needs approval of the central and state governments. The new act seeks to recognize electronic modes of transferring the title of government securities, would facilitate pledging of securities without actual transfer, and
would recognize depositories other than RBI for paperless transfer. It is hoped that the bill will be enacted soon.

There is a proposal to amend the Securities Contract Regulation Act of 1956 to provide RBI with regulatory power over the securities markets. This would ensure that RBI regulates the repos markets and securities markets insofar as they impinge on monetary and debt management policies. The proposed amendment would also facilitate introduction of indexed futures.

The Indian Stamp Act is another piece of legislation that inhibits development of debt markets. The government has received a number of recommendations for modifying the stamp duties so as to exempt securities held in dematerialized form. It is hoped these, too, will be acted upon soon.

Diversification of Investor Base

India urgently needs to diversify the investor base and encourage active trading in secondary markets. Provident funds, pension funds, insurance companies, and mutual funds are the typical investors in government securities. In addition, large corporates in the private and public sector at times have large surplus cash balances. Active management of cash is usually discouraged by public sector undertakings in view of the perceived risks involved. Provident funds and insurance companies are typically buy-and-hold investors. There is no system of marking to market and capturing total return for these funds and no incentives to improve performance. Some corporates have active treasuries but are deterred by the lack of liquidity in the markets. The challenge before the RBI and the primary dealers is how to improve liquidity in the markets.

Encouraging individual investors in the face of other more attractive measures, such as tax-free mutual funds and small savings, is well-nigh impossible. The National Stock Exchange proposes to set up a retail market segment that will have settlement guaranteed by the clearing corporation. The scheme will work if the PDs and other large holders of securities put up two-way quotes for small lots for screen trading and are able to easily transfer and retransfer stocks from RBI’s public debt office to the Clearing Corporation and vice versa.
Short Selling and Forward Transactions

Closely linked to liquidity is the issue of whether to permit market participants to undertake forward trades in securities and also go short on a net basis. Among the questions that need to be addressed here are (1) whether development of the repo market should proceed by introducing securities lending and borrowing first and then forward trading and short sales next, or whether both be introduced simultaneously; (2) whether only primary dealers should be allowed to go short or whether other large players—especially banks in the secondary markets should also be permitted to do so; (3) to what extent short selling should be permitted, whether the restrictions should apply to the period and/or the quantities, and whether such quantities should be duration weighted or based on some other measure of risk such as Value At Risk (VAR); and (4) whether restrictions should be placed on the specific securities that can be shorted, taking care to allow securities for shorting that have large floating stock and are widely held.

Primary Dealer System

The RBI has been looking at a number of issues associated with instituting a primary dealer system. The PD gets certain benefits in return for a commitment to bid in the primary auction, provide two-way quotes for securities, and achieve a certain turnover. The benefits include an underwriting commission, permission to participate in interbank money markets as borrower and lender, and also liquidity support from RBI. The support is linked to bidding commitments in dated securities and treasury bills and turnover in secondary markets. The questions of particular concern here are as follows: (1) What is the most equitable way of providing liquidity support while ensuring that the PDs provide continuous two-way quotes for specified securities? (2) Should there be any restrictions on other activities of PDs in the securities markets? Considering that they are first and foremost dealers in government securities, should there be any turnover requirement for government securities in relation to total turnover in all securities? Should there be any other requirement to ensure that PDs are predominantly dedicated to government securities? (3) From a prudential point of view, how should
capital be allocated to the various activities? How should minimum
capital be calculated and maintained, and how can multiple leverag-
ing be avoided? (4) To what extent can the principles for prudential
regulation in developed markets be applied in nascent markets? (5)
What kind of relationship should PDs have with subsidiaries? Should
PDs be allowed to float subsidiaries? How should the risk on the
parent company be assessed? (6) Should subsidiaries of foreign com-
panies be allowed to set up subsidiaries for undertaking PD busi-
ness? (7) In the context of universal banking, should the concept of
keeping banking and securities business separate be reexamined?

Trading and Settlement Systems

Transparent and on-line trading systems provide better dissemina-
tion of prices in the market and narrow bid-offer spreads. Although,
as indicated earlier, the experiment of matching trades electronically
through NSE’s WDM did not take off, the trades are being reported
with minimum delay. The RBI is trying to get a dealing system in-
stalled that will be able to disseminate to the market the details of all
trades undertaken by members of the system as soon as the deals are
done, without disclosing the identity of the entities.

A project for the complete automation of the RBI’s Public Debt
Office has just begun. Its main objectives are to provide for connec-
tivity between different offices, undertake electronic transfer of title
or pledge, and operate a securities lending and borrowing scheme if
required. Collateralized intraday liquidity support will also be pro-
vided to facilitate settlement of transactions in the DVP system. Such
support would also be required once the Real Time Gross Settle-
ment (RTGS) is introduced. It is hoped that the project will be com-
pleted for a trial run in a year’s time. In order to undertake repos
through clearing corporations, it would be necessary to have a sys-
tem that would ensure prompt margining/haircuts, for example. This
issue is currently being addressed.

Securitization

Securitization is considered an effective way to liquify the assets of
financial intermediaries and make them marketable. The RBI has
set up an expert group to go into all the legal and regulatory problems involved in promoting securitization and it is expected to suggest solutions, including recommended changes in the legal framework.

**Derivatives**

Although derivatives can prove useful in risk management and in unbundling liquidity market and credit risk, market making in derivatives is possible only when there are deep and liquid cash markets to facilitate pricing, at least in the early stages, until the momentum of the derivatives market takes over. In response to requests that market participants be allowed to conduct interest rate swaps (IRSs) and forward rate agreements (FRAs), the RBI allowed IRS and FRAs in the current year, with certain reporting requirements for market makers. Only banks and primary dealers have been allowed to undertake market making, while others—including financial institutions and corporates—are to use the products for hedging their balance sheet risks. The IRSs and FRAs have not taken off, mainly because of the lack of a term money market. Such a market will develop only when banks and financial institutions observe strict Asset-Liability Management (ALM) discipline for positive and negative mismatches, and these are rigorously monitored and enforced by the supervisors. Some also have suggested that T-bill futures should be introduced. Given the poor liquidity in the cash market, India would be ill-advised to allow futures at this stage. A critical step for the development of a derivatives market, then, is to direct all effort toward the development of the underlying cash markets.